

THE PERIODICAL CICADA - BROOD VII REVISITED (HOMOPTERA: CICADIDAE)¹

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ABSTRACT: The 1984 emergence of Brood VII of the periodical cicada in New York is reported. Heavy bird predation reduced the population in Cayuga and Livingston counties to the point where any significant emergence in 2001 is unlikely. The Onondaga County population was not similarly reduced.

In 1968 I reviewed the literature on Brood VII of the periodical cicada, *Magicicada septendecim* (L.), and recorded my own observations made in 1967. At that time it was noted that the geographical area where the brood is found had been reduced over the years. The brood was last reported in Madison County in 1899, in Monroe, Ontario, Tompkins, and Yates counties in 1916, and in Oswego County in 1933. It is now necessary to report that apparently two more counties may have been lost and that the brood probably is now restricted to one county in New York.

Emergence began on schedule: June 10 in Livingston County and June 12 in Cayuga and Onondaga counties. Emergence took place at all localities noted in 1967, and an additional site was found in Livingston County, two miles north of Geneseo, along Nations Road.

I spent most of my time with the Cayuga and Onondaga populations but made two trips to Livingston County. However, the Livingston populations were well monitored by Edward D. Beary, Paul Conklin, Steven Daniel, David Thorpe, and Carey Vasey, whose cooperation is much appreciated.

All observers noted the large number of birds feeding on the emerging cicadas. These were mostly grackles, but red-winged blackbirds were also abundant. Lesser numbers of robins and starlings were also feeding on cicadas. Cicada wings and other body fragments covered the ground. It is interesting that Felt (1917) mentioned that the large population at West Webster, Monroe County was so completely destroyed by birds in 1916 that no evidence of oviposition could be found.

A similar situation developed in both Cayuga and Livingston counties. By June 20, singing at all five sites in Cayuga County was very faint, and few cicadas could be found. On June 21, the cicadas were singing in Livingston County, but volume was much reduced. All sites in both counties were examined in early July, and very few signs of oviposition could be found.

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It was a different story on the Onondaga Indian Reservation in Onondaga County. The cicadas occupied a much larger area than in the other two counties, covering about half of the seven thousand acre reservation. Singing was still intense on June 27, and few birds were seen feeding on cicadas. However, numerous cicada fragments indicated bird activity had been considerable. Oviposition was heavy on 16 species of trees and shrubs.

On July 3, singing at Onondaga was much reduced and no cicadas were seen ovipositing. Many apparently intact cicadas were found dead on the ground, probably the result of natural mortality.

Since almost no oviposition could be found in Cayuga and Livingston counties, the brood probably is extinct there. Populations were just not high enough to support "predator satiation." It is possible, of course, that a few egg nests high in the trees were overlooked, and there will be a small emergence in 2001. On the Onondaga Indian Reservation, Brood VII appears safe for now.

Hewitt (1907) gives the meaning of Cayuga as, "the place where locusts are taken out." It now seems likely that within the next year or two some of the Cayuga Nation's ancestral ground in Cayuga County will be restored to them. It is ironic that the insects that gave them their name may no longer be found there.

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1985 ANNUAL MEETING ASSOCIATION OF SYSTEMATICS COLLECTIONS

The 1985 annual meeting of the Association of Systematics Collections will be held May 23-24, 1985, at the Los Angeles County Museum of Natural History. The program will be in the form of a symposium and will focus on the proposed National Biological Survey. For further information, contact Dr. Ke Chung Kim, Department of Entomology, Pennsylvania State University, 106 Patterson Building, University Park, PA 16802.